Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A compound according to Formula I,

or a pharmaceutically acceptable salt, hydrate, or prodrug thereof, wherein,

B, D, and E are each independently either =N- or = $C(R^2)$ -, provided at least one of B, D, and E is =N-;

at each occurance, each of R^1 , R^2 , and R^3 is independently selected from -H, halogen, trihalomethyl, -CN, -NO₂, -OR⁵, -N(R⁵)OR⁵, -ON(R⁵)R⁵, -N(R⁵)N(R⁵)R⁵, -N(R⁵)R⁵, -S(O)₀₋₂R⁵, -SO₂N(R⁵)R⁵, -CO₂R⁵, -C(O)N(R⁵)R⁵, -N(R⁵)SO₂R⁵, -N(R⁵)C(O)R⁵, -N(R⁵)CO₂R⁵, -C(=NR⁷)N(R⁵)R⁵, -C(=NR⁷)OR⁵, -C(=NR⁷)N(R⁵)R⁵, optionally substituted lower alkyl, optionally substituted lower alkynyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, and optionally substituted arylalkyl;

n is zero to five;

 R^4 is selected from -H, halogen, -CN, -NO₂, -N(R^5)OR⁵, -ON(R^5)R⁵, -N(R^5)N(R^5)R⁵, -OR⁵, -N(R^5)R⁵, -SO₂N(R^5)R⁵, -CO₂R⁵, -C(O)N(R^5)R⁵, -N(R^5)SO₂R⁵, -N(R^5)C(O)R⁵, -N(R^5)CO₂R⁵, -C(O)R⁵, -C(=NR⁷)N(R^5)R⁵, -C(=NR⁷)R⁵, -C(=NR⁷)OR⁵, -N(R^5)C(=NR⁷)N(R^5)R⁵, optionally substituted lower alkyl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, and optionally substituted arylalkyl;

- R² and R³, together with the atom or atoms to which they are attached, can combine to form a three- to seven-membered optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted cycloalkyl;
- R² and R⁴, together with the atom or atoms to which they are attached, can combine to form a three- to seven-membered optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted cycloalkyl;
- each R⁵ is independently selected from -H, optionally substituted lower alkyl, optionally substituted aryl, optionally substituted lower arylalkyl, optionally substituted heterocyclyl, optionally substituted lower heterocyclylalkyl, and a single bond to an atom of R¹;
- two of R⁵, together with the atom or respective atoms to which they are attached, can combine to form an optionally substituted three- to seven-membered heterocyclic;
- R⁵ and R⁶, together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;
- R⁵ and R⁷, together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;
- each of X and Y is independently selected from -C(=O)-, $-C(R^6)R^6$ -, -O-, $-N(R^5)$ -, $-C(=NR^7)$ -, and $-S(O)_{0-2}$ -; provided when X is -O- or $-N(R^5)$ -, then Y cannot be $-C(H)R^{6a}$ -, where R^{6a} is $-C(R^{20})(R^{21})R^{22}$ wherein at least one of R^{20} , R^{21} and R^{22} is selected from phenyl, napthyl, cyclohexyl, dihydronapthyl tetrahydronapthyl, and a five- to six-membered heteroaryl, each optionally substituted;
- or X and Y can combine to form either $-C(R^6)=C(R^6)$ or -C=C-;
- Z is selected from O, S, and a double bond to an atom of R¹;
- A is either $-N(R^5)$ or a single bond;
- each R⁶ is independently selected from -H, halogen, trihalomethyl, -CN, -NO₂, -NH₂, -OR⁵, -N(R⁵)R⁵, -S(O)₀₋₂R⁵, -SO₂N(R⁵)R⁵, -CO₂R⁵, -C(O)N(R⁵)R⁵, -N(R⁵)SO₂R⁵, -N(R⁵)C(O)R⁵, -N(R⁵)CO₂R⁵, -C(O)R⁵, optionally substituted lower alkyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted

- heterocyclylalkyl, optionally substituted arylalkyl, and a single bond to an atom of R^2 of D or E when said either D or E is $=C(R^2)$ -;
- two of R^6 , together with the atom or atoms to which they are attached, can combine to form one of an optionally substituted three to seven-membered alicylic, an optionally substituted three to seven-membered heteroalicylic, and a double bond to an atom of R^2 of D or E when said either D or E is $=C(R^2)$ -;
- each R^7 is independently selected from -H, -CN, -NO₂, -N(R^5) R^5 , -OR⁵, -S(O)₀₋₂ R^5 , -SO₂N(R^5) R^5 , -CO₂ R^5 , optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, and a single bond to a carbon of J; and
- J is selected from an optionally substituted five- to ten-membered aryl and an optionally substituted five- to ten-membered heteroaryl;
- provided the compound is not one of: 2-(2-amino-5-cyano-6-methylsulfanyl-pyrimidin-4ylsulfanyl)-N-(3-trifluoromethyl-phenyl)-acetamide, 2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-[3-(butyloxy)phenyl]acetamide, 2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-1,3-benzothiazol-2-ylacetamide, 2-{[2-amino-5cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-(5-ethyl-1,3,4-thiadiazol-2-yl)acetamide. 2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-(4-methyl-1,3-thiazol-2yl)acetamide, 2-amino-4-{[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]thio}-6-(methylthio)pyrimidine-5-carbonitrile, 2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-1,3-thiazol-2-ylacetamide, 2-(5-cyano-2-methylsulfanyl-pyrimidin-4ylsulfanyl)-N-phenyl-acetamide, 5-amino-2-methylsulfanyl-thieno[2,3-d]pyrimidine-6-carboxylic acid phenylamide, 2-(6-amino-5-cyano-2-methylsulfanyl-pyrimidin-4ylsulfanyl)-N-phenyl-acetamide, 4,5-diamino-2-(2-methoxy-ethoxy)-thieno[2,3d]pyrimidine-6-carboxylic acid phenylamide, 2-(5-cyano-6-phenyl-2phenylcarbamoylmethylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, and a 2-(6-amino-3,5-dicyano-pyridin-2-ylsulfanyl)-N-phenyl-acetamide derivative.
- 2. (original) The compound according to claim 1, wherein J is either a six-membered aryl or a five- to six-membered heteroaryl.
- 3. (original) The compound according to claim 2, wherein D is $=C(R^2)$ -.

- 4. (original) The compound according to claim 3, wherein R^4 is $-N(R^5)R^5$.
- 5. (original) The compound according to claim 4, of Formula II,

$$\begin{array}{c|c}
R^{5a} & R^{2a} \\
R^{5b} & R^{2b} & Q
\end{array}$$

$$\begin{array}{c|c}
R^{2a} & H \\
Q & R^{1} \\
R^{5b} & Q
\end{array}$$

II

wherein, R^1 , R^2 , R^3 , R^5 , n, B, E, X, and Y are as defined above; and Q is either =N- or =C(H)-.

- 6. (original) The compound according to claim 5, wherein R^{2a} is selected from halogen, -CN, -C(=O)N(R^5) R^5 , -CF₃, -CO₂ R^5 , -C(R^5)=C(R^5) R^5 , -C=C- R^5 , and -NO₂;
- 7. (original) The compound according to claim 6, wherein at least one of R^{5a} and R^{5b} is H.
- 8. (original) The compound according to claim 7, wherein R^3 is selected from -OR⁵, -NR⁵R⁵, and -S(O)₀₋₂R⁵.
- 9. (original) The compound according to claim 8, wherein at least one of B and E is =N-.
- 10. (original) The compound according to claim 9, wherein R^1 is selected from halogen, $-OR^5$, $-NR^5R^5$, $-S(O)_{0-2}R^5$, $-NO_2$, perhaloalkyl, optionally substituted lower alkyl, optionally substituted aryl, and optionally substituted arylalkyl.
- 11. (original) The compound according to claim 10, wherein R^1 is selected from halogen, $-OR^5$, $-NR^5R^5$, $-S(O)_{0-1}R^5$, $-NO_2$, perhaloalkyl, and optionally substituted lower alkyl.
- 12. (original) The compound according to claim 11, wherein A is -N(R⁵)-.
- 13. (original) The compound according to claim 12, of Formula III,

- wherein, R^3 , R^5 , X, Y, and Q are as defined above; R^{1a} is selected from halogen, lower perfluoroalkyl, -NO₂, -OR⁵, and optionally substituted C_{1-4} alkyl; and R^{1b} is selected from halogen, -OR⁵, -N(R⁵)R⁵, -SR⁵, perfluoroalkyl, and optionally substituted lower alkyl.
- 14. (original) The compound according to claim 13, wherein R^{1a} is selected from -NO₂, halogen, perfluoroalkyl, haloalkyl, optionally substituted C_{1-2} alkyl, and optionally substituted -O- C_{1-2} alkyl.
- 15. (original) The compound according to claim 14, wherein R^3 is selected from optionally substituted -O-C₁₋₄alkyl, -O-C₁₋₄perfluoroalkyl, optionally substituted -N(H)C₁₋₄alkyl, optionally substituted -N(C₁₋₄alkyl)C₁₋₄alkyl, optionally substituted -S(O)₀₋₂-C₁₋₄alkyl, and optionally substituted -S(O)₀₋₂-C₁₋₄perfluoroalkyl.
- 16. (original) The compound according to claim 15, wherein Y is either -N(H)- or $-C(R^6)R^6$ -.
- 17. (original) The compound according to claim 16, wherein X is selected from -O-, - $N(R^5)$ and -S-.
- 18. (original) The compound according to claim 17, wherein Y is $-C(R^6)R^6$ -; wherein each R^6 is independently selected from -H, halogen, trihalomethyl, -NH₂, optionally substituted -O- C_{1-4} alkyl, optionally substituted -N(H) C_{1-4} alkyl, optionally substituted -S- C_{1-4} alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl.
- 19. (original) The compound according to claim 18, wherein Y is $-C(H)R^6$ -; wherein R^6 is independently selected from -H, halogen, trihalomethyl, -NH₂, optionally substituted -O-C₁₋₄alkyl, optionally substituted -S-C₁₋₄alkyl, optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl.
- 20. (original) The compound according to claim 19, wherein Q is =C(H)-.
- 21. (original) A compound according to Formula IV,

$$\begin{array}{c|c}
R^3 \\
R^4 \\
N \\
X
\end{array}$$

$$\begin{array}{c}
R^2 \\
Y \\
O \\
IV
\end{array}$$

or a pharmaceutically acceptable salt, hydrate, or prodrug thereof, wherein,

 R^1 is selected from halogen, $-OR^5$, $-N(R^5)R^5$, $-S(O)_{0-2}R^5$, $-NO_2$, $-C(O)R^5$, perhaloalkyl, optionally substituted lower alkyl, optionally substituted aryl, and optionally substituted arylalkyl.

n is zero to five;

- R^2 is selected from halogen, -CN, -C(=O)N(R^5) R^5 , -CF₃, -CO₂ R^5 , -C(R^5)=C(R^5) R^5 , -C=C- R^5 , and -NO₂;
- R^3 is selected from -H, halogen, trihalomethyl, -CN, -NO₂, -OR⁵, -N(R⁵)OR⁵, -ON(R⁵)R⁵, -N(R⁵)N(R⁵)R⁵, -N(R⁵)R⁵, -S(O)₀₋₂R⁵, -SO₂N(R⁵)R⁵, -CO₂R⁵, -C(O)N(R⁵)R⁵, -N(R⁵)SO₂R⁵, -N(R⁵)C(O)R⁵, -N(R⁵)CO₂R⁵, -C(O)R⁵, -C(=NR⁷)N(R⁵)R⁵, -C(=NR⁷)OR⁵, -N(R⁵)C(=NR⁷)N(R⁵)R⁵, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, and optionally substituted arylalkyl;
- R^4 is selected from -CN, halogen, -NO₂, -N(R^5)OR⁵, -ON(R^5)R⁵, -N(R^5)N(R^5)R⁵, -OR⁵, -N(R^5)R⁵, -SO₂N(R^5)R⁵, -C(O)N(R^5)R⁵, -C(=NR⁷)N(R^5)R⁵, -C(=NR⁷)OR⁵, -N(R^5)C(=NR⁷)N(R^5)R⁵, optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl;
- each R⁵ is independently selected from -H, optionally substituted lower alkyl, optionally substituted aryl, optionally substituted lower arylalkyl, optionally substituted heterocyclyl, and optionally substituted lower heterocyclylalkyl;
- two of R⁵, together with the atom or respective atoms to which they are attached, can combine to form an optionally substituted three- to seven-membered heterocyclic:

- R⁵ and R⁶, together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;
- R⁵ and R⁷, together with the atom or atoms to which they are attached, can combine to form a five- to seven-membered optionally substituted heterocyclyl;
- each of X and Y is independently selected from -C(=O)-, $-C(R^6)R^6$ -, -O-, $-N(R^5)$ -, $-C(=NR^7)$ -, and $-S(O)_{0-2}$ -; provided when X is -O- or $-N(R^5)$ -, then Y cannot be $-C(H)R^{6a}$ -, where R^{6a} is $-C(R^{20})(R^{21})R^{22}$ wherein at least one of R^{20} , R^{21} and R^{22} is selected from phenyl, napthyl, cyclohexyl, dihydronapthyl tetrahydronapthyl, and a five- to six-membered heteroaryl, each optionally substituted;
- or X and Y can combine to form either $-C(R^6)=-C(R^6)$ or -C=-C;
- each R⁶ is independently selected from -H, halogen, trihalomethyl, -CN, -NO₂, -NH₂, -OR⁵, -N(R⁵)R⁵, -S(O)₀₋₂R⁵, -SO₂N(R⁵)R⁵, -CO₂R⁵, -C(O)N(R⁵)R⁵, -N(R⁵)SO₂R⁵, -N(R⁵)C(O)R⁵, -N(R⁵)CO₂R⁵, -C(O)R⁵, optionally substituted lower alkyl, optionally substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclylalkyl, optionally substituted arylalkyl, and a single bond to an atom of R¹;
- two of R⁶, together with the atom or atoms to which they are attached, can combine to form either an optionally substituted three to seven-membered alicylic or an optionally substituted three to seven-membered heteroalicylic;
- each R^7 is independently selected from -H, -CN, -NO₂, -N(R^5) R^5 , -OR⁵, -S(O)₀₋₂ R^5 , -SO₂N(R^5) R^5 , -CO₂ R^5 , optionally substituted lower alkyl, optionally substituted lower alkynyl, and a single bond to a carbon of J; and
- J is selected from an optionally substituted five- to ten-membered aryl and an optionally substituted five- to ten-membered heteroaryl;
- provided the compound is not one of: 2-(2-amino-5-cyano-6-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-(3-trifluoromethyl-phenyl)-acetamide, 2-{[2-amino-5-cyano-6-(methyl-thio)pyrimidin-4-yl]thio}-N-[3-(butyloxy)phenyl]acetamide, 2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-1,3-benzothiazol-2-ylacetamide, 2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-(5-ethyl-1,3,4-thiadiazol-2-yl)acetamide, 2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-(4-methyl-1,3-thiazol-2-yl)acetamide, 2-{[2-amino-5-cya

yl)acetamide, 2-amino-4-{[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]thio}-6-(methylthio)pyrimidine-5-carbonitrile, 2-{[2-amino-5-cyano-6-(methylthio)pyrimidin-4-yl]thio}-N-1,3-thiazol-2-ylacetamide, 2-(5-cyano-2-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, 5-amino-2-methylsulfanyl-thieno[2,3-d]pyrimidine-6-carboxylic acid phenylamide, 2-(6-amino-5-cyano-2-methylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, 4,5-diamino-2-(2-methoxy-ethoxy)-thieno[2,3-d]pyrimidine-6-carboxylic acid phenylamide, 2-(5-cyano-6-phenyl-2-phenylcarbamoylmethylsulfanyl-pyrimidin-4-ylsulfanyl)-N-phenyl-acetamide, and a 2-(6-amino-3,5-dicyano-pyridin-2-ylsulfanyl)-N-phenyl-acetamide derivative.

- 22. (original) The compound according to claim 21, wherein R⁴ is -NR^{5a}R^{5b}; wherein at least one of R^{5a} and R^{5b} is -H.
- 23. (original) The compound according to claim 22, wherein X is selected from -O-, - $N(R^5)$ -, and - $S(O)_{0-2}$ -.
- 24. (original) The compound according to claim 23, wherein Y is either $-C(R^6)R^6$ or $-N(R^5)$ -.
- 25. (original) The compound according to claim 24, wherein J is either phenyl or pyridyl.
- 26. (original) The compound according to claim 25, wherein R⁴ is -NH₂.
- 27. (original) The compound according to claim 26, wherein at least one of R^1 is selected from halo, -NO₂, -OR⁵, perfluoroalkyl, haloalkyl, and optionally substituted C_{1-4} alkyl.
- 28. (original) The compound according to claim 27, of Formula V,

wherein R^1 , R^3 , X, and Y are as defined above; and Q is either =N- or =C(H)-.

- 29. (original) The compound according to claim 28, wherein R^{1a} is selected from halo, lower perfluoroalkyl, -NO₂, optionally substituted -O-C₁₋₄alkyl, and optionally substituted C₁₋₄alkyl.
- 30. (original) The compound according to claim 29, wherein R^3 is selected from optionally substituted -O-C₁₋₄alkyl, -O-C₁₋₄perfluoroalkyl, optionally substituted -N(H)C₁₋₄alkyl, optionally substituted -N(C₁₋₄alkyl)C₁₋₄alkyl, optionally substituted -S(O)₀₋₂-C₁₋₄alkyl, and optionally substituted -S(O)₀₋₂-C₁₋₄perfluoroalkyl.
- 31. (original) The compound according to claim 30, wherein Y is $-C(R^6)R^6$ -; wherein each R^6 is independently selected from -H, halogen, trihalomethyl, -NH₂, optionally substituted -O- C_{1-4} alkyl, optionally substituted -N(H) C_{1-4} alkyl, optionally substituted -S- C_{1-4} alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl.
- 32. (original) The compound according to claim 31, wherein Y is $-C(H)R^6$ -; wherein R^6 is independently selected from -H, halogen, trihalomethyl, -NH₂, optionally substituted -O-C₁. 4alkyl, optionally substituted -N(H)C₁₋₄alkyl, optionally substituted -S-C₁₋₄alkyl, optionally substituted lower alkyl, optionally substituted heterocyclyl, and optionally substituted heterocyclylalkyl.
- 33. (original) The compound according to claim 32, wherein Q is =C(H)-.
- 34. (original) The compound according to claim 1, selected from Table 3.

Table 3

Entry	Name	Structure
1	2-[(3-cyano-4,6-dimethyl-5- nitropyridin-2-yl)oxy]-N-[3- (trifluoromethyl)phenyl]acetamide	O_2N CN CF_3
2	N-2-(2-amino-6-chloropyrimidin-4- yl)-N-[3- (trifluoromethyl)phenyl]glycinamide	H_2N N N N N N N N N N

Table 3

Entry	Name	Structure
3	[2-amino-6-(methylthio)pyrimidin-4-yl]methyl [3-(trifluoromethyl)phenyl]carbamate	H_2N N O
4	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [5-(trifluoromethyl)pyridin-2- yl]acetamide	H_2N N S CN H N S CF_3
5	N-2-[2-amino-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	H_2N N N N N N N N N N
6	2-{[2-amino-6-(methylthio)pyrimidin- 4-yl]oxy}-N-[3- (trifluoromethyl)phenyl]acetamide	S O N F F
7	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [3-(methyloxy)phenyl]acetamide	H_2N N N N N N N N N N
8	N-2-(2-amino-6-morpholin-4- ylpyrimidin-4-yl)-N-[3- (trifluoromethyl)phenyl]glycinamide	H_2N N N N N N N N N N

Table 3

Entry	Name	Structure
9	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- (4-chlorophenyl)acetamide	$\begin{array}{c} & & \\$
10	2-{[2-amino-6-(1H-1,2,3-benzotriazol-1-yloxy)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	NH ₂
11	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- (3-chlorophenyl)acetamide	H_2N N N N N N N N N N
12	N-2-(2-amino-6-chloro-5- formylpyrimidin-4-yl)-N-[3- (trifluoromethyl)phenyl]glycinamide	H_2N N N N N N N N N N
13	N-2-[2-amino-5-formyl-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	H_2N N N N N N N N N N
14	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]oxy}-N- [3-(trifluoromethyl)phenyl]acetamide	H_2N N N N N N N N N N

Table 3

Entry	Name	Structure
15	2-[(2-amino-6-chloropyrimidin-4- yl)thio]-N-[3- (trifluoromethyl)phenyl]acetamide	CI N
16	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- methyl-N-[3- (trifluoromethyl)phenyl]acetamide	H ₂ N N S CF ₃
17	N-2-[4-amino-6-(methylthio)-1,3,5- triazin-2-yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	H_2N N N N N N N N N N
18	N-2-[4-(dimethylamino)-6- (methylthio)-1,3,5-triazin-2-yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	S N N N CF3
19	N-2-[4-(methylamino)-6- (methylthio)-1,3,5-triazin-2-yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	SH SH CF3
20	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	H_2N N N N N N N N N N

Table 3

Entry	Name	Structure
21	'2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [3-(trifluoromethyl)phenyl]acetamide	NH ₂
22	'2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [3-(butyloxy)phenyl]acetamide	NH ₂ N N N N N N N N N N N N N N N N N N N
23	'2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- 1,3-benzothiazol-2-ylacetamide	H ₂ N N S O S N N N N N N N N N N N N N N N
24	'2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- (5-ethyl-1,3,4-thiadiazol-2- yl)acetamide	S N N NH ₂
25	'2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- (4-methyl-1,3-thiazol-2-yl)acetamide	
26	'2-amino-4-{[2-(3,5-dimethyl-1H-pyrazol-1-yl)-2-oxoethyl]thio}-6-(methylthio)pyrimidine-5-carbonitrile	S N S N N N N N N N N N N N N N N N N N
27	'2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- 1,3-thiazol-2-ylacetamide	NH ₂ N N N N N N N N N N N N N N N N N N N

Table 3

Entry	Name	Structure
28	ethyl 5-[({[2-amino-5-cyano-6- (methylthio)pyrimidin-4- yl]thio}acetyl)amino]-4-cyano-3- methylthiophene-2-carboxylate	H ₂ N N S O NC O
29	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- pyridin-2-ylacetamide	H ₂ N N S O H
30	2-amino-4-({2-[2,5-bis(methyloxy)phenyl]-2-oxoethyl}thio)-6-(methylthio)pyrimidine-5-carbonitrile	H_2N N S CN O O O
31	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [4-fluoro-3- (trifluoromethyl)phenyl]acetamide	H_2N N S CN H CF_3 F
32	2-[(2,6-diaminopyrimidin-4-yl)thio]- N-[4-fluoro-3- (trifluoromethyl)phenyl]acetamide	H_2N N S N S N S
33	2-[(2,6-diaminopyrimidin-4-yl)thio]- N-[3- (trifluoromethyl)phenyl]acetamide	H_2N N S CF_3

Table 3

Entry	Name	Structure
34	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [4-chloro-3- (trifluoromethyl)phenyl]acetamide	H_2N N S CN H CF_3 CI
35	2-amino-4-(methylthio)-6-({2-oxo-1-[3-(trifluoromethyl)phenyl]pyrrolidin-3-yl}thio)pyrimidine-5-carbonitrile	H_2N N S CN CF_3
36	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [6-(trifluoromethyl)pyridin-2- yl]acetamide	H_2N N S CN H N S CF_3
37	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [4-(trifluoromethyl)pyridin-2- yl]acetamide	H_2N N S CN H N S CF_3
38	{6-(methylthio)-2- [(phenylmethyl)amino]pyrimidin-4- yl}methyl [3- (trifluoromethyl)phenyl]carbamate	S CF ₃
39	[6-(methylamino)-2- (methylthio)pyrimidin-4-yl]methyl [3- (trifluoromethyl)phenyl]carbamate	S N CF3

Table 3

Entry	Name	Structure
40	{2-(methylthio)-6- [(phenylmethyl)amino]pyrimidin-4- yl}methyl [3- (trifluoromethyl)phenyl]carbamate	HN O HN CF3
41	2-{[2-(acetylamino)-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [3-(trifluoromethyl)phenyl]acetamide	S N N N N N N N N N N N N N N N N N N N
42	(2S)-2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]oxy}-N- [3- (trifluoromethyl)phenyl]propanamide	-s N
43	2-[(2-amino-6-chloro-5-formylpyrimidin-4-yl)thio]-N-[3-(trifluoromethyl)phenyl]acetamide	NH ₂ N = CI
44	N-2-[2-amino-5-(hydroxymethyl)-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	NH2 N F F OH
45	2-{[2-amino-5-formyl-6- (methylamino)pyrimidin-4-yl]thio}- N-[3- (trifluoromethyl)phenyl]acetamide	NH2 N N S O H N F F

Table 3

Entry	Name	Structure
46	2-{[2-amino-5-formyl-6- (methylthio)pyrimidin-4-yl]oxy}-N- [3-(trifluoromethyl)phenyl]acetamide	NH ₂ N N F F
47	2-{[4-amino-6-(methylthio)-1,3,5- triazin-2-yl]oxy}-N-[3- (trifluoromethyl)phenyl]acetamide	S O H F F
48	2-{[2-amino-6-(methylthio)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	S S S S S S S S S S S S S S S S S S S
49	2-amino-4-(methylthio)-6-{[2-oxo-2- (3-oxo-3,4-dihydro-2H-1,4- benzoxazin-6- yl)ethyl]thio}pyrimidine-5- carbonitrile	H_2N N N N N N N N N N
50	2-[(2-amino-6-chloro-5- formylpyrimidin-4-yl)oxy]-N-[3- (trifluoromethyl)phenyl]acetamide	CI NH2 NH2 N N N F F
51	2-{[2-amino-5-formyl-6- (phenylthio)pyrimidin-4-yl]thio}-N- [3-(trifluoromethyl)phenyl]acetamide	$S \longrightarrow S \longrightarrow N \longrightarrow F \longrightarrow F$
52	2-{[2-amino-5-(hydroxymethyl)-6-(phenylthio)pyrimidin-4-yl]thio}-N-[3-(trifluoromethyl)phenyl]acetamide	S S N N F F F

Table 3

Entry	Name	Structure
53	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [2-methyl-3- (trifluoromethyl)phenyl]acetamide	H ₂ N N S N F F
54	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [2-(methyloxy)-5- (trifluoromethyl)phenyl]acetamide	H_2N N N N N N N N N N
55	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [2-chloro-5- (trifluoromethyl)phenyl]acetamide	H_2N N N N N N N N N N
56	2-{[2-amino-5-(hydroxymethyl)-6-(methylthio)pyrimidin-4-yl]oxy}-N-[3-(trifluoromethyl)phenyl]acetamide	NH ₂
57	N-2-(6-amino-1H-pyrazolo[3,4-d]pyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]glycinamide	NH ₂ Z HZ F F
58	N-2-[2-amino-5-[(E)-hydrazonomethyl]-6-(methylthio)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]glycinamide	S NH ₂ N N N N N N N N N N N N N N N N N N N

Table 3

Entry	Name	Structure
59	N-2-[2-amino-5-[(E)- (hydroxyimino)methyl]-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	NH ₂
60	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L- alaninamide	NH ₂ N N N N N N N N N N N N N N N N N N N
61	2-{[2-amino-5-cyano-6- (methylamino)pyrimidin-4-yl]thio}- N-[3- (trifluoromethyl)phenyl]acetamide	NH N N N S N N F F
62	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [2-amino-5- (trifluoromethyl)phenyl]acetamide	H ₂ N N S N N NH ₂
63	2-amino-4-(methylthio)-6-({[6- (trifluoromethyl)-1H-benzimidazol-2- yl]methyl}thio)pyrimidine-5- carbonitrile	H_2N N S N F F F
64	2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]hydrazinecar boxamide	H ₂ N N H N F F

Table 3

Entry	Name	Structure
65	N-2-[5-cyano-2-(methylamino)-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	TZ ZH ZH ZH ZH ZH ZH ZH ZH ZH ZH ZH ZH ZH
66	2-{[2-amino-5-cyano-6- (dimethylamino)pyrimidin-4-yl]thio}- N-[3- (trifluoromethyl)phenyl]acetamide	H_2N N N N N N N N N N
67	(S)-1-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]prolinamide	H ₂ N N N H F F
68	(2R)-2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]oxy}-N- [3- (trifluoromethyl)phenyl]propanamide	-s N
69	1-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]oxy}-N- [3- (trifluoromethyl)phenyl]cyclopropane carboxamide	-S N
70	(2S)-2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]oxy}-3- methyl-N-[3- (trifluoromethyl)phenyl]butanamide	H_2N N N N N N N N N N

Table 3

Entry	Name	Structure
71	N-2-[5-cyano-2-(dimethylamino)-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	S N N N N N N N N N N N N N N N N N N N
72	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-2- methyl-N-[3- (trifluoromethyl)phenyl]glycinamide	H_2N N N N N N N N N N
73	1-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]amino}- N-[3- (trifluoromethyl)phenyl]cyclopropane carboxamide	-S N
74	N-2-[2-amino-5-cyano-6- (methylsulfinyl)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L- alaninamide	S=O N N N N N N N N N N N F F
75	N-2-[2-amino-5-cyano-6- (methylsulfonyl)pyrimidin-4-yl]-N- [3-(trifluoromethyl)phenyl]-L- alaninamide	O=SON HN FFFF
76	N-2-(5-cyano-2-morpholin-4- ylpyrimidin-4-yl)-N-[3- (trifluoromethyl)phenyl]glycinamide	N H N F F

Table 3

Entry	Name	Structure
77	2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]thio}-N- [3,5- bis(trifluoromethyl)phenyl]acetamide	H ₂ N N S N CF ₃
78	N-2-[2-amino-5-cyano-6- (methyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L- alaninamide	H_2N N N N N N N N N N
79	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[2- (methyloxy)-5- (trifluoromethyl)phenyl]-L- alaninamide	H_2N N N N N N N N N N
80	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[2- chloro-5-(trifluoromethyl)phenyl]-L- alaninamide	H_2N N N N N N N N N N
81	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-2- methyl-N-[3- (trifluoromethyl)phenyl]alaninamide	H_2N N N N N N N N N N
82	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-{3-[(4- methylpiperazin-1- yl)carbonyl]phenyl}-L-alaninamide	$\begin{array}{c c} & & & \\ & & & \\ N & & \\ N & & \\ N & & \\ N & & &$

Table 3

Entry	Name	Structure
83	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-D- alaninamide	H_2N N N N N N N N N N
84	2-[(2-amino-5-cyano-6-morpholin-4-ylpyrimidin-4-yl)thio]-N-[3-(trifluoromethyl)phenyl]acetamide	NH ₂ N N S S S F F
85	(R)-1-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]prolinamide	H ₂ N N O N F F
86	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L- ornithinamide	S CN H ₂ CF ₃
87	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-2-[2- (dimethylamino)ethyl]-N-[3- (trifluoromethyl)phenyl]glycinamide	S CN H ₂ N N O CF ₃
88	N-2-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L- alaninamide	H_2N N N N N N N N N N

Table 3

Entry	Name	Structure
89	N-2-(2,6-diamino-5-cyanopyrimidin- 4-yl)-N-[3-(trifluoromethyl)phenyl]- L-alaninamide	H_2N N N N N N N N N N
90	N-2-(2-amino-5-cyanopyrimidin-4-yl)-N-[3-(trifluoromethyl)phenyl]-L-alaninamide	H_2N N N N N N N N N N
91	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-2- methyl-N-[3- (trifluoromethyl)phenyl]-L- alaninamide	H_2N N N N N N N N N N
92	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-(3-{[2- (diethylamino)ethyl]oxy}phenyl)-L- alaninamide	S CN H
93	2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-1,2- dimethyl-N-[3- (trifluoromethyl)phenyl]hydrazinecar boxamide	H_2N N N N N N N N N N
94	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- amino-5-(trifluoromethyl)phenyl]-L- alaninamide	H_2N N N N N N N N N N

Table 3

Entry	Name	Structure
95	ethyl [1-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-2-({[3- (trifluoromethyl)phenyl]amino}carbo nyl)hydrazino]acetate	$\begin{array}{c c} S & CN \\ H_2N & N & H \\ EtO_2C & O \\ \end{array}$
96	2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-2- methyl-N-[3- (trifluoromethyl)phenyl]hydrazinecar boxamide	$\begin{array}{c c} S \\ CN \\ H_2N \\ N \\ N \\ N \\ O \\ CF_3 \end{array}$
97	3,5-diamino-4,6-dimethyl-N-[3- (trifluoromethyl)phenyl]furo[2,3- b]pyridine-2-carboxamide	H_2N N N N N N N N N N
98	3-amino-4,6-dimethyl-5-nitro-N-[3- (trifluoromethyl)phenyl]furo[2,3- b]pyridine-2-carboxamide	O_2N N O_2N N O_2N N O_2N $O_$
99	N-2-(2-amino-5-cyano-6- hydroxypyrimidin-4-yl)-N-[3- (trifluoromethyl)phenyl]-L-alaninamide	H_2N N N N N N N N N N
100	N-2-[5-cyano-2-(methylthio)pyrimidin-4- yl]-N-[3- (trifluoromethyl)phenyl]glycinamide	S N N N CF3

Table 3

Entry	Name	Structure
101	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-2- (tetrahydro-2H-pyran-4-ylmethyl)-N-[3- (trifluoromethyl)phenyl]glycinamide	H ₂ N N N CF ₃
102	N-2-(2-amino-5-cyano-6-{[2- (dimethylamino)ethyl]oxy}pyrimidin-4-yl)- N-[3-(trifluoromethyl)phenyl]-L- alaninamide	H ₂ N N N CF ₃
103	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-6-{[(1,1- dimethylethyl)oxy]carbonyl}-N-[3- (trifluoromethyl)phenyl]-L-lysinamide	NH ₂ NH ₂ NH ₂ NH
104	2-amino-4-(methylthio)-6-(methyl{(1S)-1- [6-(trifluoromethyl)-1H-benzimidazol-2- yl]ethyl}amino)pyrimidine-5-carbonitrile	NC N NH_2 NC N
105	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-2-[2- (tetrahydro-2H-pyran-4-yl)ethyl]-N-[3- (trifluoromethyl)phenyl]glycinamide	NH_2

Table 3

Entry	Name	Structure
106	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3-{[2- (diethylamino)ethyl]amino}-5- (trifluoromethyl)phenyl]-L-alaninamide	NH ₂ NH ₂ NH NH CN NH CF ₃
107	2-amino-4-(methylthio)-6-({(1S)-1-[6- (trifluoromethyl)-1H-benzimidazol-2- yl]ethyl}amino)pyrimidine-5-carbonitrile	-s N
108	2-{2-amino-5-cyano-6-[1-(3- trifluoromethyl-phenylcarbamoyl)-1S- ethylamino]-pyrimidin-4-ylamino}-N-(3- trifluoromethyl-phenyl)-2S-propionamide	H_2N N H_2N N H_3 N H_4 N N H N
109	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-2-methyl-N- (3-methylphenyl)glycinamide	NH ₂ N N N N N N N N N N N N N N N N N N N
110	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-2-methyl-N- [3-(1-methylethyl)phenyl]glycinamide	NH ₂ N N N N N N N N N N N N N N N N N N N
111	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-5- [imino(nitroamino)methyl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	$\begin{array}{c c} & & & \\ & & & &$

Table 3

Entry	Name	Structure
112	methyl 3-({N-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-L- alanyl}amino)-5-(trifluoromethyl)benzoate	NH_2
113	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-(3- nitrophenyl)-L-alaninamide	S NH ₂ N N N N N N NO ₂ NO ₂
114	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-lysinamide	S NH ₂ NH ₂ CF ₃
115	N-2-[2-amino-5-cyano-6- (propyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-alaninamide	NH ₂ N N N CF ₃ CF ₃
116	N-2-[5-cyano-2-{[2- (methyloxy)ethyl]amino}-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-alaninamide	S CF3
117	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-argininamide	NH ₂ NH ₂ NH NH NH CF ₃

Table 3

Entry	Name	Structure
118	N-2-[2-amino-5-cyano-6- (methylsulfinyl)pyrimidin-4-yl]-N-2-methyl- N-[3-(trifluoromethyl)phenyl]-L- alaninamide	NH ₂ N N N N CF ₃ CF ₃
119	N-2-[2-amino-5-cyano-6- (methyloxy)pyrimidin-4-yl]-N-2-methyl-N- [3-(trifluoromethyl)phenyl]-L-alaninamide	NH ₂ N N N CF ₃ CF ₃
120	N-2-[2-amino-5-cyano-6- (propyloxy)pyrimidin-4-yl]-N-2-methyl-N- [3-(trifluoromethyl)phenyl]-L-alaninamide	NH ₂ N N N CF ₃ CF ₃
121	N-2-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-2-methyl-N-[3- (trifluoromethyl)phenyl]-L-alaninamide	NH ₂ N N N CF ₃ CF ₃
122	N-2-{2-amino-5-cyano-6-[(1- methylethyl)oxy]pyrimidin-4-yl}-N-[3- (trifluoromethyl)phenyl]-L-alaninamide	$\begin{array}{c c} & & \\ $
123	N-5-acetyl-N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	NH ₂ NH ₂ NH ₂ NH ₂ NH ₂ NH ₂ CF ₃

Table 3

Entry	Name	Structure
124	N-2-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-(3- aminophenyl)-L-alaninamide	NH ₂ N N N N N N N N N N N N N N N N N N N
125	3-({N-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-L- alanyl}amino)-N-[2-(dimethylamino)ethyl]- 5-(trifluoromethyl)benzamide	NH ₂ NH ₂ NH
126	2-(methyloxy)ethyl ((4S)-4-{[2-amino-5- cyano-6-(methylthio)pyrimidin-4- yl]amino}-5-oxo-5-{[3- (trifluoromethyl)phenyl]amino}pentyl)carb amate	S NH_2 $NH_$
127	2-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]hydrazinecarboxa mide	NH ₂ N H H H CF ₃ CF ₃
128	1,1-dimethylethyl ((4S)-4-{[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]amino}-5-oxo-5-{[3-(trifluoromethyl)phenyl]amino}pentyl)carbamate	NH ₂ NH ₂ NH ₂ NH ₂ O t-Bu CF ₃
129	N-2-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	NH ₂ NH ₂ NH ₂ CF ₃

Table 3

Entry	Name	Structure
130	3-({N-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-methyl-L- alanyl}amino)-N-[2- (dimethylamino)ethyl]-5- (trifluoromethyl)benzamide	S.CH ₃ N CH ₃ H CH ₃ O CH ₃ O HN O H ₃ C.N.CH ₃
131	3-({N-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-methyl-L- alanyl}amino)-N-[3-(4-methylpiperazin-1- yl)propyl]-5-(trifluoromethyl)benzamide	S.CH ₃ Chiral N CH ₃ H CF ₃ HN O HN O HN O
132	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N~2~-methyl- N-{3-[(trifluoromethyl)oxy]phenyl}-L- alaninamide	S·CH ₃ N CH ₃ H ₂ N N N N N N N N N F F
133	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-(3- bromophenyl)-N~2~-methyl-L- alaninamide	H ₃ C. S CNCH ₃ H H ₂ N N N N Br CH ₃ O

Table 3

Entry	Name	Structure
134	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-{2-{[2- (dimethylamino)ethyl]oxy}-5- [(trifluoromethyl)oxy]phenyl}-N~2~- methyl-L-alaninamide	S.CH ₃ N CH ₃ H CH ₃ O CH ₃ O CH ₃ C-N-CH ₃
135	3-({N-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-methyl-L- alanyl}amino)-N-(2-morpholin-4-ylethyl)- 5-(trifluoromethyl)benzamide	S.CH ₃ Chiral N CH ₃ H CH ₃ O CH ₃ O CH ₃ O
136	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N~2~-methyl-N- [3-(trifluoromethyl)phenyl]-L-lysinamide	CH ₃ NH ₂ Chiral N H ₂ N N N F F CH ₃ O
137	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3-{[2- (dimethylamino)ethyl]oxy}-5- (trifluoromethyl)phenyl]-L-alaninamide	S.CH ₃ N CH ₃ H F F F O N CH ₃ CH ₃ CH ₃ CH ₃

Table 3

Entry	Name	Structure
138	(2S)-2-{[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]amino}-3-oxo- 3-{[3-(trifluoromethyl)phenyl]amino}propyl acetate	H ₃ C S CN O H CF ₃
139	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N~1~-[3- (trifluoromethyl)phenyl]-L-glutamamide	H ₂ N N N CF ₃
140	2-[2-amino-5-cyano-6- (methyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]hydrazinecarboxa mide	H ₃ C. N N H ₂ N N N N N N N N N N N N N N N N N N N
141	3-({N-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-L- alanyl}amino)-N-hydroxy-5- (trifluoromethyl)benzamide	S.CH ₃ N CH ₃ H CF ₃ HN O OH
142	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-3- (dimethylamino)-N-[3- (trifluoromethyl)phenyl]-L-alaninamide	H ₃ C. S Chiral N-CH ₃ N-CH ₃ F H ₂ N N N F H O

Table 3

Entry	Name	Structure
143	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-5-morpholin-4- yl-N-[3-(trifluoromethyl)phenyl]-L- norvalinamide	H ₃ C.S N H ₂ N N H O F F
144	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N~5~-[2- (methyloxy)ethyl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	S.CH3 Chiral NH H ₂ N N CF ₃
145	3-({N-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-L- alanyl}amino)-5-(trifluoromethyl)benzoic acid	S.CH ₃ N CH ₃ H CF ₃ HOOO
146	methyl N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-alpha- glutaminate	H ₃ C·S H ₃ C·O O Chiral H ₂ N N N N CF ₃
147	N~5~-(aminocarbonyl)-N~2~-[2-amino-5- cyano-6-(methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	ONH ₂ Chiral NH NH NH NH NH NH NH NH NH N

Table 3

Entry	Name	Structure
148	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	CH ₃ NH ₂ NH ₂ NH ₂ FF F
149	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-alpha-glutamine	H ₂ N N N CF ₃
150	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-serinamide	CH ₃ O CN OH H ₂ N N H O CF ₃
151	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-O- (phenylmethyl)-N-[3- (trifluoromethyl)phenyl]-L-serinamide	CH ₃ CN O H ₂ N N N CF ₃
152	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-argininamide	CH ₃ H ₂ N NH Chiral NH NH NH Chiral

Table 3

Entry	Name	Structure
153	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N~2~-methyl- N~6~-{[(phenylmethyl)oxy]carbonyl}-N-[3- (trifluoromethyl)phenyl]-L-lysinamide	Chiral H ₃ C. N H ₂ N N CH ₃ O F F F
154	Nalpha-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-tyrosinamide	H ₃ C O OH Chiral H ₂ N N N O CF ₃
155	N~5~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	H ₃ C S N HN O NH ₂
156	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N~6~,N~6~- dimethyl-N-[3-(trifluoromethyl)phenyl]-L- lysinamide	CH ₃ H ₃ C·N·CH ₃ Chiral

Table 3

Entry	Name	Structure
157	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3-[(4- methylpiperazin-1-yl)carbonyl]-5- (trifluoromethyl)phenyl]-L-alaninamide	CH ₃ Chiral N CH ₃ H CH ₃ H CF ₃ N CF ₃ N O N O H ₃ C
158	3-({N-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-L-alanyl}amino)- N-(3-pyrrolidin-1-ylpropyl)-5- (trifluoromethyl)benzamide	CH ₃ Chiral N CH ₃ H CF ₃ HN O
159	3-({N-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-L-alanyl}amino)- N-(2-morpholin-4-ylethyl)-5- (trifluoromethyl)benzamide	CH ₃ Chiral N CH ₃ H CF ₃ HN O N O

Table 3

Entry	Name	Structure
160	3-({N-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-L-alanyl}amino)- N-[2-(dimethylamino)ethyl]-5- (trifluoromethyl)benzamide	CH ₃ Chiral N CH ₃ H CF ₃ HN O H ₃ C N CF ₃
161	3-({N-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-L-alanyl}amino)- N-[3-(4-methylpiperazin-1-yl)propyl]-5- (trifluoromethyl)benzamide	CH ₃ Chiral N CH ₃ H CH ₃ H CF ₃ HN O H ₃ C N O N CH ₃ H O O O N CH ₃ H O O O O O O O O O O O O O
162	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N~2~-methyl- N~6~-{[(phenylmethyl)oxy]carbonyl}-N-[3- (trifluoromethyl)phenyl]-L-lysinamide	CH ₃ HN O F F F F F F F F F F F F F F F F F F

Table 3

Entry	Name	Structure
163	1,1-dimethylethyl ((4S)-4-{[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]amino}-5-oxo-5-{[3-(trifluoromethyl)phenyl]amino}pentyl)carb amate	H ₃ C
164	(2S)-2-{[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]amino}-3-oxo-3- {[3-(trifluoromethyl)phenyl]amino}propyl acetate	CH ₃ Chiral Chiral Chiral Chiral
165	phenylmethyl N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-alpha- glutaminate	CH ₃ O O CN H CF ₃
166	N~2~,N~5~-diacetyl-N~2~-[2- (acetylamino)-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	O CH ₃ Chiral O CH ₃ Chiral O CH ₃ Chiral O CH ₃ Chiral
167	2-(methyloxy)ethyl ((4S)-4-{[2-amino-5- cyano-6-(methylthio)pyrimidin-4- yl]amino}-5-oxo-5-{[3- (trifluoromethyl)phenyl]amino}pentyl)carb amate	S.CH ₃ NH N N N N CF ₃

Table 3

Entry	Name	Structure
168	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-5-morpholin-4-yl- N-[3-(trifluoromethyl)phenyl]-L- norvalinamide	CH ₃ Chiral N H ₂ N N N H F F
169	N-((4S)-4-{[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]amino}-5-oxo-5- {[3-(trifluoromethyl)phenyl]amino}pentyl)- N,N-dimethylmethanaminium	CH ₃ CH ₃ Chiral N CH ₃ H ₂ N N N F F
170	Methyl N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-alpha- glutaminate	CH ₃ Chiral OH ₃ C.O OH ₃ CN H ₂ N N CF ₃
171	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N~6~,N~6~- dimethyl-N-[3-(trifluoromethyl)phenyl]-L- lysinamide	H ₃ C. _N .CH ₃ Chiral
172	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N~2~-methyl-N- {3-[(trifluoromethyl)oxy]phenyl}-L- alaninamide	CH ₃ Chiral O N CH ₃ H CH ₃ H CH ₃ O F F

Table 3

Entry	Name	Structure
173	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-alpha-glutamine	CH ₃ HOOO CN H ₂ N N CF ₃ Chiral
174	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-(3- bromophenyl)-N~2~-methyl-L- alaninamide	CH ₃ Chiral O CNCH ₃ H H ₂ N N N N N N N N N N N N N N N N N N N
175	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N~1~-[3- (trifluoromethyl)phenyl]-L-glutamamide	CH ₃ Chiral O H ₂ N O CN H N CF ₃
176	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-3- (dimethylamino)-N-[3- (trifluoromethyl)phenyl]-L-alaninamide	CH ₃ Chiral O N N CH ₃ F H ₂ N N N N N CH ₃ F F F
177	Structure possibly contains amino acid derivative which is not supported in current version!	CH ₃ NH ₂ Chiral

Table 3

Entry	Name	Structure
178	N~2~-[2-amino-5-cyano-6- (methyloxy)pyrimidin-4-yl]-3- (dimethylamino)-N-[3- (trifluoromethyl)phenyl]-L-alaninamide	H ₃ C. O Chiral Chiral Chiral Chiral Chiral
179	N~2~-[2-amino-5-cyano-6- (methyloxy)pyrimidin-4-yl]-N-[3-{[2- (dimethylamino)ethyl]oxy}-5- (trifluoromethyl)phenyl]-L-alaninamide	Chiral O.CH ₃ N CH ₃ H ₂ N N CH ₃ CH ₃ CH ₃ CH ₃ CH ₃
180	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3-{[2- (dimethylamino)ethyl]oxy}-5- (trifluoromethyl)phenyl]-L-alaninamide	CH ₃ Chiral N CH ₃ H ₂ N N N CH ₃ N F F O N CH ₃ CH ₃ CH ₃
181	N~2~-[2-amino-5-cyano-6- (methyloxy)pyrimidin-4-yl]-N-(3- bromophenyl)-N~2~-methyl-L- alaninamide	H ₃ C. O CNCH ₃ H H ₂ N N N N Br CH ₃ O
182	phenylmethyl N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-alpha- glutaminate	H ₃ C·S O O H CF ₃

Table 3

Entry	Name	Structure
183	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-O- (phenylmethyl)-N-[3- (trifluoromethyl)phenyl]-L-serinamide	H ₃ C S C N C H C C F ₃
184	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N~5~,N~5~- bis[2-(methyloxy)ethyl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	S.CH ₃ NO.CH ₃ NO.CH ₃ Chiral NO.CH ₃ Chiral
185	1,1-dimethylethyl ((4S)-4-{[2-amino-5- cyano-6-(methyloxy)pyrimidin-4- yl]amino}-5-oxo-5-{[3- (trifluoromethyl)phenyl]amino}pentyl)carb amate	H ₂ N N N CF ₃
186	N~5~-acetyl-N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	CH ₃ O CH ₃ Chiral NH N N N CF ₃
187	N~5~-acetyl-N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	O CH ₃ Chiral N N N N CF ₃ Chiral

Table 3

Entry	Name	Structure
188	N~2~-[2-amino-5-cyano-6- (methyloxy)pyrimidin-4-yl]-N~2~-methyl- N-{3-[(trifluoromethyl)oxy]phenyl}-L- alaninamide	H ₂ N N N N OCF ₃
189	methyl 3-({N-[2-amino-5-cyano-6- (methyloxy)pyrimidin-4-yl]-L- alanyl}amino)-5-(trifluoromethyl)benzoate	H ₂ N N CF ₃ H CF ₃ O O CH ₃
190	3-({N-[2-amino-5-cyano-6- (methyloxy)pyrimidin-4-yl]-L- alanyl}amino)-N-[2-(dimethylamino)ethyl]- 5-(trifluoromethyl)benzamide	Chiral Chiral CH ₃ H CH ₃ H CF ₃ O NH H ₃ C Chiral
191	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-3-morpholin-4- yl-N-[3-(trifluoromethyl)phenyl]-L- alaninamide	H ₃ C. S N N N F F F F F F F F F F F F F F F F
192	N~2~-[2-amino-5-cyano-6- (methyloxy)pyrimidin-4-yl]-3-morpholin-4- yl-N-[3-(trifluoromethyl)phenyl]-L- alaninamide	H ₃ C. O Chiral

Table 3

Entry	Name	Structure
193	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-3-morpholin-4-yl- N-[3-(trifluoromethyl)phenyl]-L- alaninamide	CH ₃ Chiral
194	N~5~-(aminocarbonyl)-N~2~-[2-amino-5-cyano-6-(ethyloxy)pyrimidin-4-yl]-N-[3-(trifluoromethyl)phenyl]-L-ornithinamide	O NH ₂ Chiral OEt NH H ₂ NNNNNNH FF
195	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-D-lysinamide	SMe N H F F F F F F F F F F F F F F F F F F
196	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-N-[3- (trifluoromethyl)phenyl]-D-lysinamide	OEt N H ₂ Chiral
197	N~2~-[2-amino-5-cyano-6- (ethyloxy)pyrimidin-4-yl]-O-methyl-N-[3- (trifluoromethyl)phenyl]-L-serinamide	CH ₃ Chiral Chiral Chiral Chiral

Table 3

Entry	Name	Structure
198	N~2~-[2-amino-5-cyano-6- (methylthio)pyrimidin-4-yl]-N~5~- (methylsulfonyl)-N-[3- (trifluoromethyl)phenyl]-L-ornithinamide	CH ₃ Chiral O=\$=O NH H ₂ N N N CF ₃ Chiral

- 35. (currently amended) A pharmaceutical composition comprising the compound according to any one of claims 1 _ 34claim 1 and a pharmaceutically acceptable carrier.
- 36. (currently amended) A metabolite of the compound or the pharmaceutical composition according to any one of claims 1 _ 35claim 1.
- 37. (currently amended) A method of modulating the *in vivo* activity of a kinase, the method comprising administering to a subject an effective amount of a composition comprising at least one of: the a compound according to any of claims 1 34claim 1 and/or; the pharmaceutical composition according to claim 35, a compound explicitly provided against in claim 1 or 21, and a pharmaceutical composition comprising a compound, the composition of which was, explicitly provided against in claim 1 or 21 and a pharmaceutically acceptable carrier.
- 38. (original) The method according to claim 37, wherein the kinase is p70S6K.
- 39. (original) The method according to claim 38, wherein modulating the *in vivo* activity of p70S6K comprises inhibition of p70S6K.
- 40. (currently amended) A method of treating diseases or disorders associated with uncontrolled, abnormal, and/or unwanted cellular activities, the method comprising administering, to a mammal in need thereof, a therapeutically effective amount of a composition comprising at least one of: the a compound according to any of claims 1—34claim 1, the pharmaceutical composition according to claim 35, and/or a compound, the

composition of which was, explicitly provided against in claim 1 or 21, and a pharmaceutical composition comprising a compound, the composition of which was, explicitly provided against in claim 1 or 21 and a pharmaceutically acceptable carrier.

- 41. (currently amended) A method of screening for modulator of a p70S6 kinase, the method comprising combining either a compound according to any one of claims 1—34claim 1 or a compound, the composition of which was, explicitly provided against in claim 1—or 21, and at least one candidate agent and determining the effect of the candidate agent on the activity of said kinase.
- 42. (currently amended) A method of inhibiting proliferative activity in a cell, the method comprising administering an effective amount of: the compound according to any of claims 1—34claim 1 and/or, the pharmaceutical composition according to claim 35, a compound, the composition of which was, explicitly provided against in claim 1 or 21, and a pharmaceutical emposition comprising a compound, the composition of which was, explicitly provided against in claim 1 or 21 and a pharmaceutically acceptable carrier.
- 43. (currently amended) A method of inhibiting abnormal metabolic activity in a cell, the method comprising administering an effective amount of: the compound according to any of claims 1 34claim 1 and/or, the pharmaceutical composition according to claim 35, a compound, the composition of which was, explicitly provided against in claim 1 or 21, and a pharmaceutical composition comprising a compound, the composition of which was, explicitly provided against in claim 1 or 21 and a pharmaceutically acceptable carrier.